

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number
WO 2004/093893 A3

(51) International Patent Classification⁷: **A61K 38/02**,
38/16, A61P 25/28

(21) International Application Number:
PCT/US2004/011728

(22) International Filing Date: 16 April 2004 (16.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/463,424 16 April 2003 (16.04.2003) US

(71) Applicants and

(72) Inventors: **STRITTMATTER, Stephen, M.** [US/US]; 96
Tulip Tree Drive, Guilford, CT 06437 (US). **LEE, Daniel,**
H., S. [CA/US]; 361 Dutton Road, Sudbury, MA 01776
(US). **LI, Weiwei** [CN/US]; 8A Hastings Street, Framing-
ham, MA 01701 (US).

(74) Agents: **HALEY, James, F., Jr.** et al.; c/o Fish & Neave,
1251 Avenue of the Americas, New York, NY 10020 (US).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with (an) indication(s) in relation to deposited biological
material furnished under Rule 13bis separately from the
description

(88) Date of publication of the international search report:
3 March 2005

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: **NOGO-RECEPTOR ANTAGONISTS FOR THE TREATMENT OF CONDITIONS INVOLVING AMYLOID
PLAQUES**

(57) Abstract: The invention provides methods for treating diseases involving aberrant amyloid- β (A β) peptide deposition, includ-
ing Alzheimer's Disease, by the administration of Nogo receptor antagonists. The invention also provides method for reducing levels
of A β peptide in a mammal by the administration of soluble Nogo receptor polypeptides



WO 2004/093893 A3

INTERNATIONAL SEARCH REPORT

PCT/US2004/011728

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K38/02 A61K38/16 A61P25/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	WO 2004/014311 A (RABACCHI SYLVIA A ; LI WEIWEI (US); RELTON JANE K (US); SAH DINAH Y W) 19 February 2004 (2004-02-19) page 7, line 16 - line 20; claims 28,63; sequences 1-9 page 8, line 5 - line 17	1-41
X,P	WO 03/035687 A (NOVARTIS PHARMA GMBH ; NOVARTIS AG (CH); BARSKE CARMEN (DE); FRENTZEL) 1 May 2003 (2003-05-01) page 4 - page 5 page 20	19-24, 33,34, 39-41
X	WO 03/018631 A (NOVARTIS ERFIND VERWALT GMBH ; NOVARTIS AG (CH); BARSKE CARMEN (DE); F) 6 March 2003 (2003-03-06) page 4 - page 5 page 27; example 2	19-24, 33-41

-/--



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

29 November 2004

Date of mailing of the international search report

06/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Bochelen, D

INTERNATIONAL SEARCH REPORT

PCT/US2004/011728

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/51520 A (UNIV YALE ; STRITTMATTER STEPHEN M (US)) 19 July 2001 (2001-07-19) page 15, line 26; example 13 -----	1-41
Y	STRITTMATTER S M: "MODULATION OF AXONAL REGENERATION IN NEURODEGENERATIVE DISEASE FOCUS ON NOGO" JOURNAL OF MOLECULAR NEUROSCIENCE, BIRKHAUSER, CAMBRIDGE, MA, US, vol. 19, no. 1/2, August 2002 (2002-08), pages 117-121, XP009029170 ISSN: 0895-8696 page 117, column 1 page 120, column 1 -----	1-41

INTERNATIONAL SEARCH REPORT

PCT/US2004/011728

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: —
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 1-41 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

PCT/US2004/011728

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
WO 2004014311	A		19-02-2004	WO 2004014311	A2	19-02-2004
WO 03035687	A		01-05-2003	WO 03035687	A1	01-05-2003
				EP 1440091	A1	28-07-2004
WO 03018631	A		06-03-2003	WO 03018631	A2	06-03-2003
				EP 1423427	A2	02-06-2004
WO 0151520	A		19-07-2001	AU 2940101	A	24-07-2001
				BG 106907	A	30-05-2003
				BR 0107613	A	19-11-2002
				CA 2397199	A1	19-07-2001
				CN 1404488	T	19-03-2003
				CZ 20022438	A3	16-10-2002
				EE 200200386	A	15-12-2003
				EP 1248803	A2	16-10-2002
				HU 0203863	A2	28-03-2003
				JP 2003519481	T	24-06-2003
				NO 20023387	A	11-09-2002
				PL 356887	A1	12-07-2004
				SK 9992002	A3	02-05-2003
				WO 0151520	A2	19-07-2001
				US 2002012965	A1	31-01-2002
				US 2002077295	A1	20-06-2002
				ZA 200205403	A	20-01-2004